

MSDS  
Perfluorodimethylcyclobutane

Material Safety Data Sheet  
acc. to OSHA and ANSI  
Printing date 05/30/2000 Reviewed on 05/05/2000

1 Identification of substance:

Product details:

Trade name: Perfluorodimethylcyclobutane  
Stock number: 43036

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: [www.alfa.com](http://www.alfa.com)

Information department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)  
Perfluorodimethylcyclobutane (CAS# 28677-00-1), 100%

Identification number(s):

EINECS Number: 249-145-3

3 Hazards identification

Hazard description: • Not applicable

Information pertaining to particular dangers for man and environment  
Not applicable

4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

After eye contact

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Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment.

#### 5 Fire fighting measures

Suitable extinguishing agents

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide (CO)

Hydrogen fluoride (HF)

Protective equipment:

Wear self-contained respirator. Wear fully protective impervious suit.

#### 6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### 7 Handling and storage

Handling

Information for safe handling:

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. No special precautions are necessary if used correctly.

Information about protection against explosions and fires:

The product is not flammable

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

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Store away from oxidizing agents.

Further information about storage conditions:

Refrigerate

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

#### 8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Not required.

Additional information: No data

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.

Breathing equipment:

Use suitable respiratory protective device in case of insufficient ventilation. Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

Eye protection: Safety glasses

Body protection: Protective work clothing.

#### 9 Physical and chemical properties:

Form: Liquid

Color: Colorless

Odor: Nearly odorless

Value/Range		Unit	Method
Melting point/Melting range:	Not determined		
Boiling point/Boiling range:		45 ° C	
Sublimation temperature / start:	Not determined		
Flash point:	Not applicable		
Ignition temperature:	Not determined		
Decomposition temperature:	Not determined		

Danger of explosion:

Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined

Upper: Not determined

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Vapor pressure: Not determined  
Density: at 20 ° C 1.62 g/cm<sup>3</sup>

Solubility in / Miscibility with Water:  
Not miscible or difficult to mix

#### 10 Stability and reactivity

Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.

Materials to be avoided: Oxidizing agents

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition:  
Carbon monoxide and carbon dioxide  
Hydrogen fluoride (HF)

#### 11 Toxicological information

Acute toxicity:

Primary irritant effect:  
on the skin: May cause irritation  
on the eye: May cause irritation

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:  
Other than potential irritation (see above), no information on illness or injury from acute or chronic exposure to this product is available.

Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

#### 12 Ecological information:

General notes:  
Do not allow material to be released to the environment without proper governmental permits.

#### 13 Disposal considerations

Product:  
Recommendation  
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.

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14 Transport information

Not a hazardous material for transportation.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None

Maritime transport IMDG:

IMDG Class: None

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: None

Transport/Additional information:

Not dangerous according to the above specifications.

15 Regulations

Product related hazard informations:

Observe the general safety regulations when handling chemicals

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.

Information about limitation of use:

For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Darrell R. Sanders